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ABSTRACT

A guide for teaching with audiovisual aids, based on the in-class experiences of 30 faculty members from Memphis State University and Shelby State Community College, is presented. The faculty members represented 20 instructional areas and the range of audiovisual usage included in-class use of traditional audiovisual materials and techniques, the use of the computer for management of classroom instruction, development of video tapes for classroom instruction, and audiotutorial programs. Special problems, solutions, and recommendations for the use of audiovisuals for classroom instruction were the areas of focus. Faculty comments are presented under the following categories: assessing the quality of audiovisuals, selection of audiovisual materials, teaching areas where audiovisuals are particularly useful, how to use audiovisuals in instruction, and problems associated with audiovisual equipment. (SW)

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Practitioners' Views or. . . .

TEACHING WITH AUDIO-VISUAL AIDS

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1627 Anderson Avenue, Box 3000
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August, 1978

Introduction to Practioners' Views

Practioners' Views are offered as one means to share the insights, observations, and recommendations of experienced college teachers with their colleagues. The Views will make concrete suggestions about ways to improve teaching.

A basic assumption of these Views is that there is no SINGLE, CORRECT way to teach. The effectiveness of one's teaching depends on a multitude of factors including: the objectives of the particular course; the teaching style and other traits of the instructor; and such student characteristics as learning ability, motivation and educational goals. These Views papers suggest various approaches to address problems in teaching and their authors hope that they will aid their colleagues in experimenting with the professional practice of college teaching.

The Center Staff is pleased to publish Teaching with Audio-Visual Aids, written by Dr. Earl Potter.

Dr. Potter is currently the Director of the Learning Media Center and a staff member of the Center for Instructional Service and Research at Memphis State University. His teaching experience encompasses high school, junior college and university instruction. He is a frequent lecturer on the subject of the use of audio-visual aids in teaching. He has been the featured speaker at conferences on educational technology in nursing education and business education.

Stephen C. Brock
William E. Cashin

Fall 1978

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Practitioners' Views on . . .

TEACHING WITH AUDIO-VISUAL AIDS

Purpose

This Practitioners' Guide is offered as one means to share the insights, observations, and recommendations of experienced college teachers with their colleagues. It is devoted to the topic of teaching with audio-visual aids. The primary source of information was the in-class experiences of thirty faculty using audio-visuals in their teaching. Their comments and recommendations are the result of first-hand experiences rather than from systematic study. It is hoped that this guide will provide useful information to colleagues who may use audio-visuals in the classroom for the first time and those with extensive experience in using audio-visuals who may find a new perspective or revitalization of their present orientation and practice from the insights and experience of others.

Procedure

Faculty from Memphis State University and Shelby State Community College who share a similar pedagogical approach met during the Fall of 1977 to discuss the topic of teaching with audio-visuals. The faculty met in groups of ten (thirty faculty in all).* They represented twenty different instructional areas. The only requirement for inclusion in the

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*The following participants met to offer their insights and recommendations:

Biology - Joe Broome
Center for Instructional Service and Research - Betty Gee, G. Douglas Mayo
Curriculum and Instruction - Marilyn Powell, Betty Hill
Educational Support - Tom Osborne
English - Bee Jay Freeman
Foundations of Education - Don Dellow, George Dowd, Henry Zurhellen
Geography - John Sobol
History - Paul Ropp
Home Economics - Dixie Crase
Instructional Development - Jim Baxter, Otto Benavides
Instructional Television - Jimmie Mattson
Interior Design - Bonnie Everson
Learning Media Center - Earl Potter
Library - Mary Edith Walker
Library Services - Sheila Scullock, Evelyn Clement, Millicent Lenz, Ramona Mahood
Mathematics - Hugh McHenry, Vickie Prince
Natural Sciences - Jimmy Williams
Nursing - Gloria Horton
Radiology - Stan Washlesky
Social Work - Betty Dawson
Sociology - Grant Stitt

discussion groups was that they extensively use audio-visuals in their teaching. The range of audio-visual usage included in-class use of traditional audio-visual materials and techniques, the use of the computer for management of classroom instruction, development of video tapes for classroom instruction and audio tutorial programs, to name a few. The faculty groups were asked to address the following practical questions:

1. What are the special problems which face the instructor who uses audio-visuals in classroom instruction?

2. What means have these faculty found to be effective in solving these pedagogical problems?

3. What recommendations would you make to a colleague who was thinking of using audio-visuals in the classroom?

What follows here is a summary and, in some instances, elaborations of points which the instructors made in the discussions. The comments are divided into five parts and a conclusion.

I. Assessing the quality of audio-visuals
II. Selection of audio-visual materials
III. Teaching areas where audio-visuals are particularly useful
IV. How to use audio-visuals in instruction
V. Problems associated with audio-visual equipment

I. ASSESSING THE QUALITY OF AUDIO-VISUAL MATERIALS

A. One difficulty mentioned by the group was in finding information about quality audio-visual materials.

1. Producers of audio-visuals, more times than not, publish catalogs listing their entire product line. Most instructors do not relish the time which must be spent in researching catalogs for possible materials. The easiest approach to this problem is to consult the institution's media/resource center staff or instructional development center. Although these resource people may not be able to immediately suggest materials, they are aware of producers who place suitable materials on the market, and they have the research tools to identify materials. Resource centers usually will order preview materials for the faculty and eliminate much of the inconvenience in acquiring these resources.

2. Unfortunately, many of the indices for audio-visual materials are not as informative as their counterparts in the print area. However, there are legions of free educational audio-visual materials usually indexed by instructional areas. These indices may be obtained from the media or resource center. In addition, there are numerous bibliographies of audio-visual materials arranged by special topics.

3. Many professional organizations (e.g., American Medical Society, Red Cross, and American Cancer Society) and most governmental agencies (e.g., Department of Interior, U.S. military, and HEW) produce

audio-visuals and are most happy to provide instructors with lists of their most current audio-visuals. Conferences and workshops are very valuable to instructors. These groups usually feature audio-visuals which are outstanding in individual fields.

4. Do not forget, as a source, the textbook which is being used for the individual course. Most textbook publishers will provide bibliographies of audio-visuals which will accompany the instructional text. There are also many textbooks which will list audio-visual materials along with the bibliography for additional readings at the end of each chapter or section.

5. In the final analysis, for one reason or another, many instructors are not able to find exactly what is needed. In most cases, instructor-developed materials are very effective. Many or most institutions have resource development, instructional development, instructional research, or faculty development centers which have the expertise and resources to aid the instructor. The resource people in these centers help faculty develop ideas and transfer these ideas onto slides, transparencies, videotape, or whatever medium is chosen to be the most effective. These centers are especially effective because they release the faculty from technical chores and permit the instructor to direct the project so that more important details from the learning standpoint may be considered by the instructor.

B. The faculty repeatedly asked the question: what is the best audio-visual for the classroom?

1. If this question could be satisfactorily answered, many of the problems of education would also be answered. There are educators who believe that education is simply a technological problem which can and must be answered. There were those in the discussion group who agreed with this assessment. At any rate, the participants did have some specific thoughts on this question. They felt that filmstrips were definitely not suited for college level use (this estimate was agreed to by those faculty who made use of filmstrips). The reasons given were that filmstrips are too slow paced, give too much attention to single concepts, and have little content relationship between visual and audio (those filmstrips which have audio tapes as part of the program). The group felt filmstrips were either for remedial work or for younger groups. Many of the faculty voiced the same opinion about slides but, it should be noted, several subject matter areas lend themselves to the use of slides, for example, art, architecture, and interior design, to name a few. The faculty participants recognized this fact but still held the opinion that, in general, slide and filmstrip formats were not very effective. Most of the participants felt that the 16mm format and video tape were by far the most effective audio-visuals because of their ingredient of motion (or animation). Motion imparts non-verbal communication and adds a dimension of time compactness which cannot be fully realized with other audio-visual formats. Multiple screen presentations using slides were also rated high in effectiveness because they approach motion.

2. At this point in the discussion, it would be of some help to point out a few recognized advantages and disadvantages of certain audio-visual formats.

	Advantages	Disadvantages
Slides	may be adapted for automatic presentations	requires more planning and preparation than most other formats
	vivid colors	requires some classroom preparations (e.g., subdued light)
	can be complemented by synchronized audio program	order during lecture not easily changed
	inexpensive to produce	
Filmstrips	generally the same as for slides	order of filmstrip frames cannot be changed
	useful for specific repetitive exercises	simple and general approach has limitations
Overhead Transparencies	can maintain eye contact with the class	restricts movement
	highly flexible, can be updated or changed easily	have to learn usage to be effective
	no adaptation of classroom needed	
	color or black and white	
	spontaneity as well as planning and preparation by instructor possible	
	blends well with instructor preferences (e.g., can be slow or fast paced, presents both complicated and simple concepts, excellent for summary)	
	probably the least expensive of all audio-visuals	

	Advantages	Disadvantages
16mm Film	ability to depict movement and animation	requires subdued light
	can expand or compress time	equipment is heavy and expensive; film is expensive
	can be used from a variety of perspectives	requires experience to operate or trouble-shoot equipment
	a complete communication medium, juxtaposes time and space	difficult to use segments, usually complete film must be presented, rigid time sequence
		requires great deal of preparation (sometimes it is easier to make the product rather than search for film)
		will usually take up most of individual class period
Video	very flexible	requires experience as an operator
	significant diagnostic tool	requires proper lighting
	may be edited for tailor-made instruction	expensive
	color or black and white possible	audience number limited (video projection systems have remedied this problem to some extent)
Computer	frees instructor of repetitive instruction	expensive
	has unlimited patience for repetitive types of instruction	requires experienced operators
	efficient and effective in many instructional situations (e.g., computer will analyze student responses and will determine subsequent instruction)	although highly efficient when properly implemented, implementation may be frustrating.

This list is not all-inclusive. However, it will make the reader aware of certain formats and options associated with their use. Other formats such as audio tape, models, and pictures, to name a few, may be used successfully, but generally with less of an instructional impact, at least in higher education, than those listed.

II. SELECTION OF AUDIO-VISUAL MATERIALS

A. The cost of audio-visuals was also a point of concern to the discussion groups. Several were concerned about the cost of non-printed materials (audio-visuals) as compared to printed materials (books) when it came time to recommend instructional purchases to the department chairman.

1. Obviously in this age of accountability and sparse funds, money should be wisely spent. However, in most of the opinions expressed, money does not appear to be a deciding factor except at the point of acquisition. (In other words, does the institution have enough funds to buy materials?) Other qualities ranking before cost consideration were: (1) suitability of the materials in terms of meeting instructional objectives in one or more courses, (2) currency of the audio-visual, and (3) the number of students who may be enrolled in classes in which the materials will be used. Another point brought out by the group was whether there was a less expensive item which could meet the instructional objectives as well.

2. In considering criteria for the selection of non-print materials, an informative article is contained in the April, 1977 issue of Educational Technology, volume XVII, number 4 - "Selection of Media by Media Centers". In this study, three faculty groups judged the following criteria, in rank order, to be appropriate to the selection of non-print media.

a. Suitability of the media item in terms of meeting instructional objectives in one or more courses. How strongly it is recommended by one or more faculty members.

b. Technical quality of the media item.

c. Superiority of the media item over other, less expensive means of achieving instructional objectives in the area.

d. Extent to which non-print media presently on hand in this particular area or discipline are being utilized in instruction.

e. Extent to which the media item may be expected to remain current over a period of several years, as opposed to becoming out-of-date in a short period of time.

f. Number of students that may be enrolled in classes in which the media item will be used during a school year.

g. Cost of the media item, including consideration of the amount that other academic departments are able to contribute to its purchase. (Lower cost receives higher score.)

h. Inadequacy of the current collection in this particular discipline, as opposed to areas in which a large number of non-print media items are already held.

Included in this article is a rating form developed from the research which is well worth consideration in rating non-print media for purchase.

3. If the institution has facilities to produce video tape, many times the instructor-made product is better or more apropos than materials purchased on the commercial market. Considering costs, materials produced by universities are bargains.

B. Many of the participants were confused about the new copyright law and how it would affect them and their use of a variety of materials.

Copyright regulations are not always clear, especially as they affect educators. With the advent of reasonably priced video tape records and other technical equipment, educators have a wide variety of audio-visual materials at their fingertips and conflicting guides as to what materials they may use. The wisest course is to get direction from the institution's attorney. In the absence of this help, it is suggested that a conservative approach be used. One of the main issues with copyright is royalties. At stake is whether or not one is trying to avoid purchasing the program. Most of the participants felt that materials used for classroom instruction, for criticism, or for other similar instructional purposes and were otherwise not available for purchase would not be a violation of copyright laws. Although the discussion continued pretty much the rationale for in-class use of copyrighted materials, it is advisable that an instructor be prudent in his interpretation of the "fair use" clause.

III. TEACHING AREAS WHERE AUDIO-VISUALS ARE PARTICULARLY USEFUL

Inquiry was made as to areas where audio-visuals might complement traditional teaching methods such as lecturing.

This question is frequently asked, and it is worthwhile noting that there are many teaching areas in which it is difficult to gain the same advantages from other instructional methods as those derived from audio-visual materials. Detailing interview skills using video as an evaluative

tool is very effective. Video taping on-site case studies for teaching areas such as social welfare, nursing, and the like, are very effective. Using video in skill or physical endeavors such as tennis or gymnastics as an evaluative tool is very effective and difficult to match any other way. The use of slides and video as a laboratory tool is almost indispensable for the sciences and medical training areas. When an expert cannot be brought to the classroom, either an audio or video tape may well serve the same purpose. Another effective means of bringing experts into the classroom is the use of conference telephone in which the students listen as well as ask questions via long distance telephone.

IV. HOW TO USE AUDIO-VISUALS IN INSTRUCTION

A. Several faculty made extensive use of the transparency format and wanted to know from the group what the best way of using them might be.

1. Transparencies fall into the same category as filmstrips and slides. However, transparencies are probably the most versatile and least expensive of all visuals. Transparencies lend themselves to diagrams, charts, schematics, and are effective in giving an orderly presentation regardless of the complexity of the material. Transparencies are especially valuable to the instructor who will tolerate few interruptions or little extraneous activity during presentations. Motion to some degree may be added to a transparency by means of a polarmotion spinner and polarized film, both very simple to use.* For fast-paced presentations, an interesting and complementary effect may be obtained from information placed on a role of acetate ahead of time and simply rolled across the projector upon demand. In using the roller, one drawback is encountered if a change takes place in the presentation. The information is in the order of presentation, usually step by step, and cannot readily be changed.

2. The transparency is valuable as a constant point of reference. Avoid simply reading from a transparency. Use the visual as an example from which an explanation may be made, or as an illustration of a difficult concept which would be confusing if relying on verbal explanation alone.

3. Develop transparencies which are direct, short and simple. Always prepare the students for frames to come and always require the student "to have to do something" as a result of seeing the information.

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*A polarmotion spinner is a device consisting of a circular disc of polarized material mounted on a small motor which provides circular motion. A second piece of polarized film is placed upon that portion of the transparency and then through the rotating spinner, the effect of motion is experienced by increasing and decreasing the speed of the spinner.

4. Transparencies are especially helpful in dealing with abstract concepts, relating them to concrete objects and concepts. Transparencies also help the instructor to:

a. provide meaningful information;

b. elicit student response;

c. guide students' thinking;

d. extend the human experience;

e. stimulate thinking;

f. establish cues for learning.

B. Many students complain that, at times, they are bored with filmstrips and other audio-visual items. As one instructor stated, "I sometimes share their view and can hardly sit through some of them myself." A concurrent problem experienced by faculty as they use audio-visuals is the "day off" syndrome affecting students upon the announcement of a film or other audio-visual.

1. Essentially, the problem can be overcome by making sure that the material is significant in the first place. To avoid a number of the pitfalls, one suggestion is to make sure that the audio-visual is a substantive part of the course. If it is worth being included in the course, it is worth being included in an examination.

2. The interest factor may well be in the hands of the instructor. Few audio-visual items are capable of carrying the full import of instruction. One solution offered by a faculty member was to determine the effect the audio-visual might have on the students. Is it documentary in nature; does it elicit emotion; or is it a knowledge type audio-visual? One instructor, in an educational foundations course, uses 16mm film to elicit emotion. His technique is to juxtapose selected 16mm films for the emotional effect. He attempts to get the students to experience the feelings involved in an effort to elicit contrasting experiences. In the end, he hopes to guide the students into a learning situation. For example, he pointed out that he might begin the class with a film on birth which elicits one set of responses from the class, let us say, warm or pleasing responses. Following this sequence, he might show a short film segment treating the circumstances of the crippled or handicapped. This segment would, of course, bring about a different response than the first. A third segment might be shown dealing with euthanasia and this segment would elicit possibly a third response. By using audio-visuals in this manner, he feels that the instructor can instill interest on the part of the students and guide them into a learning situation.

Comment: Audio-visuals have a learning impact, and directing and controlling this impact is a main concern of anyone interested in using audio-visuals as a tool in education. One instructor noted this impact contending that any number of texts or lectures could not detail what one documentary 16mm film did for his history class. This particular film

documented the dropping of the atomic bombs on Hiroshima and Nagasaki. The underlying potential problem is with the inability of the instructor to effectively use the audio-visual. Reasons for ineffectiveness are numerous but the fact that a particular audio-visual falls flat is not necessarily a problem with the audio-visual's suitability. The use of audio-visuals cannot be left to chance if learning is expected to take place. Audio-visuals are not a substitute for teaching. An audio-visual will not carry the teaching obligation to fulfillment; this rests with the instructor.

C. What possible use can be made of dated audio-visual materials? If it is out of date and not the latest information, how can it be used in the classroom?

Good materials should be able to be seen numerous times and different information derived each time, depending upon the perspective. Excellent contrasts of knowledge and learning styles may be gotten from older materials when compared with current information. For instance, in two areas, experimental and clinical psychology, it is very valuable to be able to contrast and study earlier techniques with current techniques. There is a 1965 film entitled Three Approaches to Psychotherapy featuring Dr. Carl Rogers, Dr. Frederick Perls, and Dr. Albert Ellis. The impact of these three scientists upon their field is notable, and any instructor would be able to comment upon the development of psychotherapy using these films as a base.

D. Many of the faculty voiced difficulty in using audio-visuals as a beginner. They felt a few suggestions for colleagues who are about to start using audio-visuals would be helpful.

1. Most educators are amateurs in using audio-visuals. They have difficulty in identifying materials which may be useful in their own disciplines. They have difficulty knowing which format is best. Unfortunately, more times than not trial and error lead the way. Industry educators who use audio-visuals extensively have had far more success than academic educators using similar materials.

A few guidelines are suggested. Choose audio-visuals much the same way as any resource item or instructional aid is selected. The instructor should choose audio-visual materials as he would choose a test question. Some of the questions to be asked would be: (1) will the content add to the instructional objectives; (2) for what purpose is the audio-visual to be used; is the format suitable to the situation; (3) would the time used for the media item be better used for something else; (4) is the content important, informative, interesting; (5) is the audio-visual suitable in its function? Although listed in numerical order, there is no conscious intent to suggest the importance of one question over another. However, of those mentioned, question (1) -- will the content add to the instructional objectives? -- should receive special attention. There is the need to define educational goals and instructional objectives before choosing suitable audio-visuals. Too often instructors attempt to select audio-visuals and build course work around them. The goals and objectives of the course should provide guidance for the instructor. The instructor should not let the audio-visuals dictate the direction of the course.

2. It is not always necessary to present the entire material; choosing portions for the benefit of the instructional situation and the students.

3. Do not be overly cautious to use the the same audio-visual more than once for the same audience. As previously mentioned, given a different perspective or purpose, suitable materials may be shown many times without risk of overexposure.

E. When using an audio-visual in a class, several faculty members mentioned that they would go to considerable length to explain, define, and further enlarge upon the content. A few even followed the audio-visual with a handout pertaining to important portions of the presentation. A question was raised by some colleagues, i.e., "aren't you going to too much trouble for a film?", or "wouldn't these students be better served if they spent their time in the library rather than watching a movie?". These questions can only be resolved by the importance of the objective being taught.

F. One way of using television as an instructional tool is in the area of evaluation. Career teaching areas, business, health sciences, technical areas such as radiology, and even interior design have made effective use of portable television and its advantage of instant replay. Interview skills, patient care skills, how to use technical equipment, and even the model layouts for design classes have all been video taped and used to evaluate student skills in these areas, simulating real-life situations. The student is video taped as his presentation unfolds using both visual and verbal information. Immediately afterwards, the teacher or other students critique the presentation in an attempt to help not only the presenter, but also to refine and improve their own skills.

It is apparent in the case of certain audio-visuals, television in this case, that it is most effective if in large measure it takes over the presentational responsibility of teaching, thus freeing the classroom teacher to put more time into shaping and reinforcement activities. In such a situation, the teacher is a manager of learning, and proper communicative use of television is beneficial.

Another instance of television's unique position in teaching is a video tape produced by National Geographic entitled Man the Incredible Machine. Sophisticated photographic and recording devices, as a rule unavailable to the classroom, guide the audience through parts of the human body seldom seen by human eyes. Students are able to view the interior of the heart and witness the rhythmic movements of its valves and then view the network of blood vessels, watching and listening as blood courses through the vessels. Other areas of the body, for example the inner ear and brain, are also studied. Unless students enter the health sciences field, this production is possibly a once-in-a-lifetime exposure. There is little doubt that any other similar presentation available for the classroom could rival the informational impact of this film in presenting certain facts about the body and aspects of the health sciences.

G. One of the goals of instruction is to make learning reflect as nearly as possible real situations, or the real complexities of everyday life. In most instances, it is difficult to capture the essence of real life situations and yet maintain an atmosphere suitable for instruction.

Audio-visuals have the capability of extending the instructor and encompassing realistic situations. It is important for instruction to simulate real life experiences and yet still provide the possibility for managed learning. If, for some reason, it is not feasible to take the student to the situation, it may be feasible to bring the learning situation to him. The use of audio-visuals may be the most prudent alternative in that an audio-visual may be as close to the real situation as is possible. There are instances in which reality may not be the most effective for learning due to a variety of constraints, class size, for example, dangerous situations, distance, and a multitude of other constraints. For instance, one law school experienced difficulties with a block of instruction dealing with courtroom and trial procedures. It was the habit of instructors to meet the classes at the trial site. However, due to many constraints such as continuances, lengthy questioning of trial participants, and other unexpected delays, the students came away with little information on the specified topics. A solution was found by video-taping simulated trial situations which demonstrated the topic in question. The simulation participants were sitting judges, practicing attorneys, and speech and drama students. In all, thirteen hours of video tape were produced which demonstrated certain trial techniques and procedures. The one drawback experienced was that almost one year was consumed in completing the project. On the other hand, the instructors developed a learning module wherein the atmosphere was suitable for instruction and the information was presented in a realistic manner. In the final analysis, coping with real life situations is what education is all about and provides insights into problems and solutions which cannot be fully appreciated otherwise.

V. PROBLEMS ASSOCIATED WITH AUDIO-VISUAL EQUIPMENT

Instructors mentioned equipment and software difficulties in the classroom which often are annoying. Several suggestions were offered.

A. One of the obvious suggestions is to become familiar with the equipment before using it for class, both regular operational steps and trouble shooting. The group felt that equipment problems were experienced infrequently, but whatever problems occurred, it was nearly always fatal for that particular period of instruction. A good rule of thumb is to check the equipment before using it to discover any malfunctions, for example, belts, bulbs, and the like. It is also a good idea to have the equipment "loaded" for use rather than load it after the class is in session. In both cases, the preparation will pay off. If equipment malfunctions, the instructor must have patience.

B. A few hints were offered in the area of film. Always check film before use. Many times the film is wound upside down and backwards. It is difficult to discover by sight examination unless you have experienced the problem previously. If film breaks, do not use scotch tape, or any tape for that matter, to repair it. Continue to show the film. Simply wrap the broken piece around the revolving take-up reel until it catches and repair it later by sending it to the media or resources center. With the use of instructional aids comes inevitable pitfalls. Malfunction and breakage are always possibilities. However, these or other problems should not discourage the use of audio-visuals or other instructional aids.

In concluding this paper, several practitioners' skeptical views will be summarized and enumerated. They are not intended to blunt the enthusiasm of the reader who has sought answers to questions about audio-visual aids. Briefly, they are:

1. Most of the faculty noted difficulties in locating audio-visual materials for use. The most appropriate way to locate non-print materials is not as well developed as that for locating other materials, e.g., books.

2. Faculty often are not aware of instructional resource centers and the functions they serve in the educational scheme.

3. Faculty seem less likely to use materials which do not have motion as a part of the format, e.g., there is less use of slides than of 16mm film.

4. Video-format seems to be a very promising audio-visual if the technical problems become less bothersome. However, faculty need more experience with the format.

5. 16mm film still seems to be the mainstay of audio-visuals in higher education.

6. Potential for instructor-made materials is still untapped to any significant degree. It appears that faculty feel that too much time is involved, and there is little concrete incentive from institutions to continue the painstaking work.

7. There still appears to be a reluctance on the part of many faculty to use any type of audio-visual for a variety of reasons, e.g., unsuitable materials, apathy toward audio-visuals, lack of scholarly appeal, remedial, etc.

8. Computer based education or the use of the computer as an instructional aid is largely untapped and ignored.

9. There appears to be little systematic effort associated with the purchase of audio-visuals. Many purchases and selections are made from little more than subjective evaluation with little thought as to specific uses. It appears that there is a general thought process or selection process which says "this film would have some good uses; let's get it". The end result is non-use and wasted money.

Possibly the case for audio-visuals has been drawn too broadly or too narrowly in such short space; however, the opinions presented identify pertinent problems and, in many cases, possible answers, at least from the everyday use standpoint. Generally, the comments pose useful suggestions for the thoughtful practitioner.